

Remarks

Claim 1-28 are pending in the application. Claim 1 is amended above to clarify that the original transformed cells are transformed with a recombinant polynucleotide. Support for this amendment is found at, for example, page 14, line 19. Accordingly, no new matter is introduced by this Amendment. Entry of this Amendment and reconsideration of the amended claims is respectfully requested. Upon entry, claims 1-28 will remain pending before the examiner.

Applicants gratefully acknowledge the withdrawal of rejections over Coruzzi *et al.* set forth at page 2 of the latest Office Action.

Applicants respectfully traverse the § 102(b) and § 103(a) rejections of the claims over Long *et al.* set forth at pages 2-6 of the latest Office Action. In support of their traversal, Applicants reassert the cited reference is not enabling. It fails to provide the ordinary artisan with any expectation of success. In fact, the cited reference provides nothing but an invitation to experiment. Although Long *et al.* states that "Plant nitrogen metabolism has been altered by transformation with a highly active assimilatory bacterial glutamate dehydrogenase gene," no details whatsoever are provided. There is no teaching of how one would identify such a gene. No DNA sequence information is provided. No source plasmid is identified. No restriction enzyme cleavage information is provided. There is no teaching regarding source organism for the gene. No transformation vector is provided. No transformation methods are suggested. There is no teaching regarding the target plant species. In fact, there is no proof that any transgenic plant was obtained, nor even any transgenic plant cells. Although the authors assert that nitrogen metabolism in some type of purportedly transgenic plant was altered, they do not tell in what way it was altered. They speculate that "increasing the activity of plant nitrogen metabolism enzymes may alter plant growth", but maybe not. They further speculate that "increased yield and protein content . . . may result," but maybe not. They state that their unidentified bacterial GDS gene "has been altered by PCR . . . to modify the coding region "yet they provide no guidance as to what alterations were made. They assert that the 5' non-coding region of the unidentified GDS gene has been altered, but they don't tell how. They assert that the 3' non-coding region has been altered, but they don't tell how. They state that "certain codons likely to inhibit expression . . . have been altered", but they don't tell how. Finally, they conclude "The effects of the various sequence substitutions [none of which are

identified] on gene expression in plant cells [unidentified] compared to the unmodified gene [unidentified] will be reported." The ordinary artisan is clearly left to speculate whether any effects were observed or not. There is no teaching that the experiments in unidentified plant cells using unidentified transformation techniques (successful?) with an unidentified transformation vector, which may or may not have contained an unidentified bacterial GDH sequence, which was purportedly modified in a number of teasingly unspecified ways, had any observable effects at all.

It is irrefutable that to be a sufficiently anticipatory prior art reference under §102, the prior art reference must be enabling. The Court of Appeals for the Federal Circuit has stated, "when there is no disclosure of any specific starting material or of any of the conditions under which a process can be carried out, undue experimentation is required; there is a failure to meet the enablement requirement that cannot be rectified by asserting that all of the disclosure related to the process is within the skill of the art." *Genentech Inc. v. Novo Nordisk A/S*, 42 USPQ2d 1001, at 1005 (Fed. Cir. 1997). Long *et al.* discloses none of their starting materials. Long *et al.* discloses none of the conditions under which their processes were performed. In view of the foregoing, it is abundantly clear that this one paragraph abstract fails to meet the requirements of an anticipatory reference and the rejection should be withdrawn.

Further, regarding obviousness, Long *et al.*, provides nothing but the suggestion to experiment to one of ordinary skill in the art. It is woefully lacking in specifics of any kind, whether experimental procedures or resulting data, which might provide the ordinary artisan with the required reasonable expectation of success. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, 127 S. Ct. 1727 (2007). Because the reference is not enabling and fails to provide any expectation of success to the ordinary skilled artisan, no *prima facie* case of obviousness has been set forth, and the rejection should be withdrawn. Reconsideration is respectfully requested.

Next, Applicants request reconsideration of the §102(b) rejection of claims 1, 3-5, 8, 10, 21, and 25 over Gupta *et al.*, set forth at pages 6-7 of the Office Action. Claim 1 has been amended above to specify that the initial transformant is a plant cell that has been transformed with a recombinant polynucleotide. The cited reference describes intergeneric gene transfers resulting from protoplast fusion. Accordingly, claim 1 as amended is not anticipated. Claims 3-5 and 8 depend from claim 1 and thus also are not anticipated. Claim 10 is not anticipated because the cited

reference does not disclose culturing a plant. Claim 21 requires that the expression cassette imparts increased yield to a transgenic plant resulting from transgenic plant cells relative to wild type plants resulting from wild type plant cells. This limitation is not taught by the reference and is not inherent. Further, claims 5 and 25, which include a "chloroplast transit peptide" as one element of the claim, are not anticipated by Gupta *et al.* because Gupta *et al.* is silent about whether the glutamate dehydrogenase was targeted to chloroplasts, and this characteristic is not inherent. Contrary to what is asserted in the Office Action, Applicants' specification at page 2, second paragraph, teaches that, while GDH of Chlorella can be targeted to the chloroplasts, the majority of plant GDH's are localized in the mitochondria. Accordingly, Applicants believe that none of the claims as currently pending are anticipated by the cited reference, and reconsideration is respectfully requested.

Finally, Applicants gratefully acknowledge the Examiner's indication that claims 6-7, 11 and 27-28 would be allowable if rewritten in independent form.

In view of the foregoing remarks and amendments to the claims, Applicants believe that the claims as currently pending are in condition for allowance, and such action is respectfully requested.

Applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

Respectfully submitted,


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